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nate combination of circumstances missed the last mail, together with the rest of my month's correspondence. This accident is the more to be regretted, that some requests for special observations will, I fear, be too late now to be attended to so fully as I feel sure they would otherwise have been.

My health has somewhat suffered from the prolonged strain of the past two months, and I propose to-morrow to go "up the mountain" for a week's holiday and cool fresh air, and then to return to the completion of the triangulation of the *Mars* stars of comparison and the observations of *Melpomene*, when I hope the present period of cloudy weather will be past.*

Mars Bay, Ascension Island,
October 5, 1877.

On the Inferences for the Value of Mean Solar Parallax and other Elements deducible from the Telescopic Observations of the Transit of Venus, 1874, *December* 8, *which were made in the British Expedition for the Observation of that Transit.* By Sir G. B. Airy, K.C.B., Astronomer Royal.

The Society are aware that, in response to a question in the House of Commons, a Report of the results as to the value of the Mean Solar Parallax derived from the telescopic observations made in the British Expedition for observing the late Transit of *Venus* was prepared and printed in the past summer, and is now on sale with other parliamentary documents. Although all important points were fully treated in that Report, several minor matters were necessarily deferred; some which, in the first instance, did not present themselves for consideration; and some which, under pressure of time, it was difficult to examine. I propose, in the present Paper, to supplement the Parliamentary Paper; to describe the process there pursued up to the point of treatment of equations, omitting, however, the somewhat voluminous details; and to resume the equations and to treat them in what appears to be the legitimate form; presenting the results which, I think, necessarily follow from the British telescopic observations. At some future time, I trust, these observations, and these reductions (with any variations which time may suggest) in a more orderly form, and with the additional inferences to be derived from the photographic operations, will be printed under the auspices of the British Government.

Acting as official superintendent, and under official responsibility, I have examined and approved every part of the operation. But I am bound to state that the most important discrimination of classes of observations, the scrutiny of individual observations, the organisation of an efficient computing staff, and

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* The statements of the observations of *Mars* which form part of these Reports are printed p. 17 *et seq.*—Ed.

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the general maintenance of order in the calculations, are due to Captain G. L. Tupman, R.M.A., head of the British Expedition for observing the Transit of *Venus*.

The printed paper to which I have alluded specifies the elements of geographical position and the evidence for accuracy of longitude at each of the stations. It contains also the description of the classes of observations to which the observers had attached definite times. At ingress it was usually possible to distinguish three classes of recorded observation, which, for convenience, were marked α, β, γ, of which β appeared to be most certain. At egress the classes (in the opposite order as regarded change of angular interval between the limbs) were δ, ϵ, ζ, η; ϵ or ζ appeared to correspond with β (I think ϵ the better, but ζ was more frequently noted), and η corresponded vaguely with α. The observations of all these classes are carefully distinguished and fully exhibited.

The order of reductions then adopted was as follows:—The observations were first divided into the two great groups of Ingress and Egress, which were kept separate to the end. Then the group of Ingress was divided into different pairs of comparison (accelerated by parallax at Sandwich Islands with retarded at Kerguelen; accelerated at Sandwich Islands with retarded at New Zealand; retarded at New Zealand with retarded at Rodriguez; retarded at New Zealand with retarded at Kerguelen). And the group of Egress was similarly divided into pairs (retarded at Mokattam and Suez with retarded at Rodriguez; retarded at Mokattam and Suez with accelerated at Kerguelen; retarded at Thebes (Luxor) with retarded at Rodriguez; retarded at Thebes with accelerated at Kerguelen). And in each of the pairs for Ingress, the α, the β, the γ, of one station was compared separately with the α, the β, the γ, of the other; and in each pair for Egress, the δ, the ϵ, the ζ, of one station was compared separately with the δ, the ϵ, the ζ, of the other.

The reduction of a comparison of observations made at two stations was thus completed. Adhering to the first steps in my Paper printed in the *Monthly Notice* of 1874, December 8, the registered times of all observations were converted into Greenwich Sidereal Times; and with these, and with a table of Tabular Places and Parallaxes which has long since been circulated, the Tabular Geocentric Places and Tabular Local Parallaxes were prepared, and the apparent Local Tabular Distance between the centres of the Sun and *Venus*, affected in each case by a symbolical multiple n of the effect of increasing Tabular Parallax by $\frac{1}{100}$ part, was computed for every observation. This apparent local distance between centres, thus computed for Greenwich time of observed contact of limbs, ought to agree with the simple tabular assumed difference of semidiameters; and, for each

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station, an equation was formed, asserting this equality, affected only by errors in the places and in the semidiameters of the Sun and planet. The effects of these latter errors were assumed to be equal at the observations made at the two stations, and therefore disappeared in the comparison of the two equations, leaving as an unknown term the multiple of n. The numerical value of n being found from this equation, and the assumed numerical value of the Sun's mean parallax adopted in the calculation being $8''\cdot950$, the true value as found from these observations is $8''\cdot950 \times \left(1+\frac{n}{100}\right)$.

After carefully considering all the results for n, and combining them with proper weights, the values obtained for Mean Solar Parallax were the following:

By Ingress, $8''\cdot739$, weight 10·46;
By Egress, 8·847, weight 2·53;
General Result, 8·760.

In order to insure general correctness of the result, and also to ascertain the values of the errors in the tabular places of the Sun and *Venus*, and to show how all may be affected by possible errors of observation &c., I have now thought it best to form equations strictly in the manner described in my paper of 1874, December 8, and to treat the whole mass of equations, both for Ingress and for Egress, in one united assemblage, by the method proper for combination of equations.

To prepare for this operation it appeared desirable, if possible, to reduce the times of all the observations at Ingress to the times which would have been adopted by the observers for phase β, and to reduce all at Egress to those for phase ζ. For this purpose comparisons were made of all observations which could connect the different phenomena. The results obtained were

The observation α is *earlier* than β by $24^{s}\cdot22$; {and the angular distance between centres of Sun and planet is *greater* at α than at β . . .} by $0''\cdot78$.

The observation γ is *later* than β by $20^{s}\cdot17$; {and the angular distance is *less* at γ than at β .} by $0''\cdot64$.

The observation δ is *earlier* than ζ by $48^{s}\cdot4$; {and the angular distance is *less* at δ than at ζ .} by $1''\cdot63$.

The observation ϵ is *earlier* than ζ by $21^{s}\cdot0$; {and the angular distance is *less* at ϵ than at ζ .} by $0''\cdot72$.

The observation η is *later* than ζ by $72^{s}\cdot1$; {and the angular distance is *greater* at η than at ζ .} by $2''\cdot41$.

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No use is made of the observations η.

The tabular apparent distances between the limbs of the Sun and *Venus*, having been computed for the registered time of every observation, were then affected with these corrections, and were considered to represent the true tabular distances of limbs, subject to the assumption that the phase β for Ingress and the phase ζ for Egress, intended to correspond to apparent contact of the true limbs of the Sun and *Venus*, may require corrections which I shall call β and ζ; that the tabular semidiameters of the Sun and planet require the corrections δR and δr, and their difference therefore requires the correction $\delta\text{R}-\delta r$, which I shall call ρ; and that the excesses of the Right Ascension and North Polar Distance of *Venus* above those for the Sun require the corrections δ.RA and δ.NPD. There may be a clock-error or error of longitude affecting all the times of observation at one station, and therefore all the distances of limbs at one station, by the same quantity, different for different stations: for these the symbols t_1, t_2, &c. are used. When all these corrections are applied, the tabular distances of limbs ought to $=0$. This is the requirement which defines the form to be used for the equations; it is assumed that the probable error in satisfying this requirement is the same for each equation.

The equation was formed for every recorded observation. I do not here give all the details; I may, however, state that the number of observations was 54, made by 18 observers; and the number of equations was therefore 54.

The following are the sums of the equations at each station. It is to be remarked that δ.RA, δ.NPD, and $\rho-\beta$, are expressed in seconds of arc; that t_1, t_2, &c. are expressed in seconds of time; and that the other coefficients are abstract numbers.

Ingress at Honolulu, 10 observations:

$$+78''\cdot40=-2''\cdot280\times n+6\cdot5324\times\delta.\text{RA}-7\cdot0606\times\delta.\text{NPD}-10\times(\rho-\beta)-0''\cdot342\times t_1.$$

Ingress at Rodriguez, 8 observations:

$$+54''\cdot14=+1''\cdot554\times n+4\cdot8868\times\delta.\text{RA}-5\cdot9946\times\delta.\text{NPD}-8\times(\rho-\beta)-0''\cdot247\times t_2.$$

Ingress at Kerguelen, 9 observations:

$$+61''\cdot03=+1''\cdot937\times n+5\cdot3908\times\delta.\text{RA}-6\cdot8446\times\delta.\text{NPD}-9\times(\rho-\beta)-0''\cdot267\times t_3.$$

Ingress at New Zealand, 2 observations:

$$+14''\cdot20=+0''\cdot028\times n+1\cdot2347\times\delta.\text{RA}-1\cdot4861\times\delta.\text{NPD}-2\times(\rho-\beta)-0''\cdot064\times t_4.$$

Egress at Mokattam and Suez, 7 observations:

$$+26''\,01=-1''\cdot415\times n-1\cdot7146\times\delta.\text{RA}-6\cdot7488\times\delta.\text{NPD}-7\times(\rho-\zeta)+0''\cdot239\times t_5.$$

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Egress at Luxor, 5 observations:

$$+19''\cdot 17 = -0''\cdot 954\times n - 1\cdot 2022\times\delta.\mathrm{RA} - 4\cdot 8272\times\delta.\mathrm{NPD} - 5\times(\rho-\zeta) + 0''\cdot 169\times t_6.$$

Egress at Rodriguez, 9 observations:

$$+34''\cdot 73 = -0''\cdot 245\times n - 1\cdot 9692\times\delta.\mathrm{RA} - 8\cdot 7432\times\delta.\mathrm{NPD} - 9\times(\rho-\zeta) + 0''\cdot 294\times t_7.$$

Egress at Kerguelen, 4 observations:

$$+14''\cdot 09 = +0''\cdot 403\times n - 0\cdot 7834\times\delta.\mathrm{RA} - 3\cdot 9091\times\delta.\mathrm{NPD} - 4\times(\rho-\zeta) + 0''\cdot 125\times t_8.$$

It was then necessary to consider the details in the mode of combining these equations, and the subjects to which the solution should be directed.

The equations are favourable for the determination of n, of δ.RA, and of δ.NPD. But when we examine the position of $\rho-\beta$ and $\rho-\zeta$, a new consideration presents itself. The quantity ρ as a matter affecting observation is not independent of δ.RA and δ.NPD. We can, by alteration of δ.RA and δ.NPD, alter ρ by any amount, and by the same amount at Ingress and at Egress. I have thought it best, therefore, to place ρ, as an undetermined constant, on the constant side of the equation, and, carrying its factor through all the operations which lead to ultimate solution, to exhibit its effect on the final results for n, for δ.RA, and for δ.NPD. And I have treated the effects of possible errors of Greenwich time on each sum of equations (t_1, t_2, &c. multiplied by the number of equations) in the same way.

For correct application of the Theory of Probabilities, it is necessary to give such a form to each of the equations which are to be collected that the probable errors of all will be equal. Let e be the probable error of the equation given by one observation (all being supposed liable to the same chance-error, as has been mentioned). Then the probable error of the sum of the ten equations at Honolulu will be $e\sqrt{10}$; the sum of the ten equations must therefore be divided by $\sqrt{10}$, and thus an equation is formed whose probable error is e. Now to form the Normal Equation most favourable for the determination of n (for instance), this equation of Honolulu (already formed by dividing the sum of equations by $\sqrt{10}$) must be multiplied by its coefficient of n (which has been formed by dividing the coefficient of n, in the sum of equations, by $\sqrt{10}$). And therefore, if the sum of equations for Honolulu be multiplied by its coefficient of n, the product must be divided by 10 in order to form the equation proper to enter into the combination which forms the Normal Equation. The same applies to δ.RA, δ.NPD. The general error of time t_1 will be simply multiplied by the reduced coefficient of n.

Similar remarks apply to the other stations.

The Normal Equations finally formed are the following:—

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$$(1)\quad -\ 2{\cdot}4658 = \left\{\begin{array}{l} +1{\cdot}7543\times n+1{\cdot}1881\times\delta.\mathrm{RA}+1{\cdot}0807\times\delta.\mathrm{NPD}-1{\cdot}2390\times(\rho-\beta)+2{\cdot}2110\times(\rho-\zeta) \\ +{\cdot}0780\times t_1-{\cdot}0480\times t_2-{\cdot}0575\times t_3-{\cdot}0009\times t_4-{\cdot}0483\times t_5-{\cdot}0322\times t_6-{\cdot}0080\times t_7+{\cdot}0126\times t_8 \end{array}\right\}$$

$$(2)\quad +108{\cdot}2705 = \left\{\begin{array}{l} +1{\cdot}1881\times n+12{\cdot}5369\times\delta.\mathrm{RA}-7{\cdot}8001\times\delta.\mathrm{NPD}-18{\cdot}0450\times(\rho-\beta)+5{\cdot}6695\times(\rho-\zeta) \\ -{\cdot}2234\times t_1-{\cdot}1509\times t_2-{\cdot}1599\times t_3-{\cdot}0395\times t_4-{\cdot}0585\times t_5-{\cdot}0406\times t_6-{\cdot}0643\times t_7-{\cdot}0245\times t_8 \end{array}\right\}$$

$$(3)\quad -243{\cdot}9714 = \left\{\begin{array}{l} +1{\cdot}0807\times n-7{\cdot}8001\times\delta.\mathrm{RA}+39{\cdot}2672\times\delta.\mathrm{NPD}+21{\cdot}3858\times(\rho-\beta)+24{\cdot}2283\times(\rho-\zeta) \\ +{\cdot}2415\times t_1+{\cdot}1851\times t_2+{\cdot}2031\times t_3+{\cdot}0476\times t_4-{\cdot}2304\times t_5-{\cdot}1632\times t_6-{\cdot}2856\times t_7-{\cdot}1222\times t_8 \end{array}\right\}.$$

And their solutions are:—

$$n = \left\{\begin{array}{l} -2{\cdot}1911+0{\cdot}0429\times(\rho-\beta)-0{\cdot}1331\times(\rho-\zeta) \\ -{\cdot}0606\times t_1+{\cdot}0249\times t_2+{\cdot}0310\times t_3-{\cdot}0011\times t_4+{\cdot}0185\times t_5+{\cdot}0118\times t_6-{\cdot}0100\times t_7-{\cdot}0143\times t_8 \end{array}\right\}$$

$$\delta.\mathrm{RA} = \left\{\begin{array}{l} +5^{\prime\prime}{\cdot}7227-1{\cdot}2502\times(\rho-\beta)-0{\cdot}9371\times(\rho-\zeta) \\ +^{\prime\prime}{\cdot}0237\times t_1+^{\prime\prime}{\cdot}0072\times t_2+^{\prime\prime}{\cdot}0069\times t_3+^{\prime\prime}{\cdot}0029\times t_4+^{\prime\prime}{\cdot}0071\times t_5+^{\prime\prime}{\cdot}0050\times t_6+^{\prime\prime}{\cdot}0123\times t_7+^{\prime\prime}{\cdot}0062\times t_8 \end{array}\right\}$$

$$\delta\cdot\mathrm{NPD} = \left\{\begin{array}{l} -5^{\prime\prime}{\cdot}0164-0{\cdot}2977\times(\rho-\beta)-0{\cdot}7995\times(\rho-\zeta) \\ +^{\prime\prime}{\cdot}0001\times t_1-^{\prime\prime}{\cdot}0039\times t_2-^{\prime\prime}{\cdot}0046\times t_3-^{\prime\prime}{\cdot}0005+t_4+^{\prime\prime}{\cdot}0069\times t_5+^{\prime\prime}{\cdot}0051\times t_6+^{\prime\prime}{\cdot}0101\times t_7+^{\prime\prime}{\cdot}0046\times t_8 \end{array}\right\}$$

where $\rho-\beta$ and $\rho-\zeta$ are expressed in seconds of arc, and t_1, t_2, &c. in seconds of time.

The value of Equatoreal Mean Solar Parallax, corresponding to $n = -2{\cdot}1911$, is $8^{\prime\prime}{\cdot}754$; and the mean distance of the Sun's centre is 93,375,000 miles.

In adopting for the results the form in which they are here exhibited, I have endeavoured to make them the most complete which it is possible to extract from the Telescopic Observations of the Transit of *Venus* now treated.

Royal Observatory, Greenwich, 1877, *November* 6.

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Statement of Mr. Gill's Observations of Mars obtained at Ascension between July 31 *and September* 4, *both inclusive.*

	Date.	Evening Observations.				Morning Observations.				
		Stars of Comparison observed.	Hour-angle of first and last Obs.	Temp. (F.) before and after Obs.	Barom. before and after Obs.	Stars of Comparison observed.	Hour-angle of first and last Obs.	Temp. (F.) before and after Obs.	Barom. before and after Obs.	
	1877.		h m	°	in.		h m	°	in.	
	July 31	$q_2\ n_2\ t_2$	4 30	74·5	30·167	$q_2\ n_2\ t_2$	0 27	72·6	30·164	Made at Garrison.
			2 32	73·5	30·150		2 40	72·8	30·116	
Shifting from Garrison to Mars Bay.										
	Aug. 5	$q_2\ n_2\ t_2$	4 51	75·0	30·223	$q_1\ t_1\ n_2$	1 7	73·5	30·164	Made at Mars Bay
			3 21	74·0	30·223		2 51	74·2	30·183	
Ill in bed										
	Aug. 10	...	...	...	...	$q_1\ t_2\ n_2$	2 43	73·6	30·190	do.
							3 45	73·5	30·209	
	Aug. 12	$q_2\ n_2\ t_2$	4 35	73·0	30·201	...	...	...	...	do.
			3 21	72·7	30·195					
	Aug. 13	...	...	...	...	$q_1\ t_2\ n_2$	2 3	71·7	30·164	do.
							2 59	71·9	30·175	
	Aug. 14	$q_2\ n_2\ t_2$	5 18	73·0	30·188	$q_1\ t_1\ n_1$	1 59	72·5	30·162	do.
			3 23	72·7	30·199		3 11	72·1	30·176	

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Date.	Evening Observations.				Morning Observations.				
	Stars of comparison observed.	Hour-angle of first and last Obs.	Temp. (F.) before and after Obs.	Barom. before and after Obs.	Stars of comparison observed.	Hour-angle of first and last Obs.	Temp. (F.) before and after Obs.	Barom. before and after Obs.	
1877.		h m	°	in.		h m	°	in.	
Aug. 15	$q_2\ s_2\ n_2$	4 2	73·8	30·177	$q_1\ s_1\ n_2$	1 55	72·2	30·157	Made at Mars Bay.
		2 58	73·0	30·150		3 29	73·0	30·130	
Aug. 16	$q_2\ s_2\ n_2$	4 17	73·5	30·173	$q_1\ s_1\ n_1$	3 34	73·2	30·134	do.
		2 50	73·3	30·179		4 2	72·3	30·146	
Aug. 19	$m_2\ n_2\ r_2$	4 34	73·5	30·183	$m_1\ n_1\ r_1$	2 49	73·3	30·143	do.
		3 27	73·1	30·209		3 29	73·1	30·193	
Aug. 20	$n_2\ r_2\ \lambda_2$	4 14	74·0	30·184	$n_1\ r_2\ \lambda_2$	1 51	72·3	30·180	do.
		3 11	73·3	30·192		3 31	72·8	30·138	
Aug. 21	...	...	...	...	$n_1\ r_2\ \lambda_2$	1 40	72·7	30·117	do. Much cloud; long delay.
						4 37	72·0	30·130	
Aug. 23	$n_1\ r_3\ l_3$	4 51	74·3	30·164	...	...	...	...	Made at Mars Bay.
		2 33	73·7	30·182					
Aug. 24	$n_2\ q_3\ l_2$	4 43	74·7	30·150	$q_3\ l_3\ n_2$	1 58	73·1	30·122	do.
		2 32	74·0	30·175		4 4	74·4	30·119	

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Aug. 26	$n_2\ q_3\ l_2$	4 44	74·5	30·100	...	...	...	...	do.
		2 24	73·8	30·123					
Aug. 27	$n_2\ h_2\ l_2\ m_2\ \lambda_1$	4 56	73·9	30·113	...	...	...	...	do.
		2 15	73·5	30·137					
Aug. 29	$i_1\ m_3\ f_1\ h_1\ \lambda_1$	4 35	73·5	30·150	$\lambda_1\ h_2\ m_3\ f_1\ i_1$	1 37	72·1	30·096	do.
		2 53	73·0	30·150		3 31	72·9	30·082	
Aug. 31	$f_2\ m_2$	3 36	74·2	30·142	$f_2\ m_2$	1 30	72·9	30·100	do. The planet in the line joining the stars; third star not required.
		2 29	73·7	30·153		3 0	73·0	30·100	
Sept. 2	$g_3\ \lambda_3\ k_1\ i_1$	3 43	74·2	30·116	...	...	...	...	Made at Mars Bay.
		1 51	73·2	30·150					
Sept. 4	$f_2\ k_2\ g_4$	4 48	73·9	30·122	...	...	...	...	do.
		3 4	73·3	30·150					

The figures subfixed to the letters indicating the stars of comparison observed show how many *complete measures* of the distance of the planet from the star have been observed.

A *complete measure* means four bisections so arranged as to eliminate index error of the instrument and error in the assumed diameter of the planet.

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Statement of Mr. Gill's Observations of Mars obtained at Ascension between September $5^{d}{\cdot}0$ *and the end of the Series of Observations.*

Date.	Evening Observations.				Morning Observations.				
	Stars of comparison observed.	Hour-angle of first and last Obs.	Temp. (F.) before and after Obs.	Barom. before and after Obs.	Stars of comparison observed.	Hour-angle of first and last Obs.	Temp. (F.) before and after Obs.	Barom. before and after Obs.	
1877.		h m	°	in.		h m	°	in.	
Sept. 5	$g_6\ f_1\ h_1$	4 39	74·2	30·169	g_{12}	0 37	72·7	30·168	
		2 58	73·5	30·189		4 15	71·9	30·128	
Sept. 6	$f_3\ g_4\ e_2\ h_1$	4 47	74·1	30·170	$g_2\ e_2\ h_1$	1 28	72·4	30·164	
		2 21	73·0	30·191		3 38	72·0	30·139	
Sept. 7	$g_1\ e_2\ h_1\ d_1\ f_1\ k_1\ \gamma_1$	4 37	74·3	30·166	$e_1\ g_2$	1 36	72·6	...	Much cloud & delay
		2 28	73·0	30·200		3 51	72·7		
Sept. 8	$g_2\ e_3\ h_2$	4 32	74·1	30·174	$d_1\ k_1\ \gamma_1\ f_1\ g_1\ e_2\ h_2$	1 3	72·5	30·195	
		2 38	73·4	30·195		4 20	72·6	30·164	
Sept. 9	$g_1\ e_1$	3 27	73·6	30·180	$d_1\ \theta_1\ g_4\ e_4$	1 36	73·0	30·154	
		3 4	73·7	30·196		4 31	72·7	30·142	
Sept. 10	$g_2\ e_2\ \theta_1\ d_1\ f_1\ \gamma_1$	3 37	74·0	30·162	$g_4\ e_4$	2 31	72·5	30·150	
		1 44	73·2	30·186		4 16	72·0	30·137	
Sept. 11	$g_3\ e_2\ \mu_2$	4 36	74·2	30·162					
		3 10	73·4	30·199					

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Sept. 15	c_1 e_1	3 32	73·0	30·132	...	...	...	...	The distance μ is very small. It is proposed to combine these, assuming a uniform scale value for both nights.
		3 9	not read						
Sept. 16	μ_2	4 0	72·5	30·088	...	...	...	...	
		3 40	not recorded						
Sept. 17	c_2 e_2 β_2 μ_2	4 22	72·3	30·064	β_1 e_1	3 2	71·5	30·091	Long interruption by cloud.
		1 28	71·8	30·100		4 40	69·7	30·050	
Sept. 19	e_2 b_2 c_1	3 41	72·9	30·070	e_2 b_2 c_1	1 20	72·1	30·100	
		2 14	72·0	30·096		4 0	71·5	30·036	
Sept. 22	μ_1 c_1	1 47	...	...	c_1	1 45	72·3	30·092	
		1 27	73·3	30·100		1 59	73·0	30·080	Read after long delay.
Sept. 23	μ_2 b_2 c_1	4 24	74·0	30·066					
		3 7	73·0	30·093					
Sept. 24	a_1 b_2 c_1 β_2	4 9	73·3	30·055	a_1 b_1 c_1 β_2	2 19	72·2	30·083	
		2 9	72·7	30·100		3 50	70·8	30·045	
Sept. 25	...	...	...	...	a_1 b_1 c_1 β_1	2 44	73·0	30·084	
						4 35	72·3	30·058	
Sept. 27	a_2 b_1 c_1 β_1	3 34	74·0	30·134					
		2 32	73·2	30·144					
Oct. 3	a_2 b_2	3 44	...	...	a_3 b_3	1 31	73·0	30·136	
		1 41	74·3	30·136		4 28	72·0	30·094	